FINAL REPORT

Limited Scope Indoor Air Quality Survey

SSMC IV

for

National Oceanic & Atmospheric Administration

March 5, 2001

Interagency Agreement #: D8H01CO31200

Task: 9903

April 5, 2001

Prepared by

US Public Health Service

Division of Federal Occupational Health

Bethesda Central Office

Executive Summary

At the request of the National Oceanic & Atmospheric Administration (NOAA), Federal Occupational Health (FOH) collected indoor air quality measurements for temperature, relative humidity, carbon dioxide, carbon monoxide, and airborne fungal spores throughout Building SSMC-4, located at 1305 East-West Highway, Silver Spring, Maryland. Measurements were taken on March 5, 2001 following the methodology described below.

Temperatures throughout the building ranged from 66.9-76.4 ^{0}F. Indoor relative humidity ranged from 22.3-27.4%.

Current guidelines of the American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE) Standard 55-1995 (Thermal Environmental Conditions for Human Occupancy) recommend temperatures in the range of 68-75^{0}F in winter season and 73-79^{0}F summer season, along with maintaining 30 - 60% relative humidity. These ranges are based on a 10% dissatisfaction criterion.

Temperature was generally within acceptable range, with 6 of 97 readings exceeding 75^{0}F. All indoor relative humidity measurements were below 30%.

Carbon dioxide measurements provide an indicator of available “fresh air” in the space. Current standards describe indoor carbon dioxide levels below 850 ppm (AIHA), or no greater than a 700 ppm differential between outside and inside air concentrations (ASHRAE 62-1999) as generally acceptable. Carbon dioxide measurements throughout the building ranged from 443-1031 ppm. Carbon dioxide measured late afternoon outdoors was 590-592 ppm. Indoor measurements were found to be no greater than 700 ppm above outdoor measurements. 37 of 99 measurements on floors 2-11 had carbon dioxide readings exceeding 850 ppm.

Since there were no combustion sources in the building, carbon monoxide levels were as expected, between 0-2 ppm.

With regard to microbial sampling, indoor fungal levels were lower than those of outdoors and fungi detected indoors were similar to those detected outdoors with the following exceptions:

1) Aspergillus versicolor, a toxigenic fungi, was predominant in sample 4-1-1;

2) Aspergillus niger, an opportunistic fungi was predominant in samples 4-2-3, 4-2-4, and 4-11-1;

3) Penicillium was either predominant or present in samples 4-12-7, 4-13-6, 4-13-8, 4-10-1, 4-8-1, and 4-5-1.

4) Stachybotrys chartarum was not detected.

Visual inspection of air handler units serving SSMC 3, performed on 3/6/01, found units to be clean, dry, and generally well maintained.

By comparison to measurements collected in SSMC4 on March 9, 2000, CO2, temperature, relative humidity, and CO ranges were slightly lower.

	CO2 (PPM)	Temperature^{0}F	Relative Humidity %	CO (PPM)
March 2000	568-1156	70-77	21-38.7	0-8
March 2001	443-1031	66.9 – 76.4	22.3-27.4	0-2

Based upon this limited scope investigation, DFOH recommends

1) the HVAC system on should be checked to ensure all components are properly operating, and that fresh air is adequately distributed to the space;

2) visual inspection to detect any fungal proliferation in the areas where Aspergillus or Penicillium were found identified.

Introduction

At the request of the National Oceanic & Atmospheric Administration (NOAA), Federal Occupational Health (FOH) performed a limited scope indoor air quality investigation of Building SSMC-4, located at 1305 East-West Highway, Silver Spring, Maryland. The purpose of the investigation was to perform a second round of sampling for comparison with recognized industry standards and previous sampling of the space. The investigation was took place on March 5, 2001. Evaluation methodologies and results are presented in the following report.

Evaluation Methods

Measurements of temperature, relative humidity, carbon monoxide, and carbon dioxide were taken in eight locations on each floor of the building as indicators of relative indoor air quality using a TSI Q Trak IAQ monitor, model 8550/8551. Each floor was designated into two zones on either side of the elevator lobby. Four measurements were taken in each zone in randomly selected locations on the interior and exterior of the floor. Wherever possible, locations were identical to those measured during the previous surveys. A limited number of previously sampled spaces were inaccessible, therefor adjacent locations were selected. A strategy was designed to completely sample one side of the building from top to bottom, then the other side from bottom to top. The strategy was designed to account for time of day variations in measurements, particularly carbon dioxide measurements which often increase over the workday.

Air samples for fungal contamination were collected by a culturable method using Andersen N-6 samplers at a flow rate of 28.3 L/min. Indoor Andersen air samples were collected for 3 minutes and outdoor samples were collected for both one and three minutes. Two percent (2 %) malt extract agar (MEA) and cellulose Czapek agar (CCA) was used to recover general fungi and cellulose-loving fungi, respectively. All plates were incubated in a 25˚C incubator and were examined every other day for up to 10 days to ensure the full recovery of fungi. Fungal identification was based on colony morphology, spores and conidia formation. Total fungal colonies formed on each plate were counted and recorded. Fungal levels in samples were presented as colony forming units (CFUs) per measuring unit.

Standards/Criteria

The IAQ Assessment followed general guidelines specified by the Environmental Protection Agency "Building Air Quality" Guide for Building Owners and Facility Managers, and the "Industrial Hygienist's Guide to Indoor Air Quality Investigations" published by the American Industrial Hygiene Association, Technical Committee on Indoor Environmental Quality.

ASHRAE Standard 55-1995 (Thermal Environmental Conditions for Human Occupancy) recommends temperatures in the range of 68-75^{0}F in winter season and 73-79^{0}F Summer season. These ranges are based on a 10% dissatisfaction criterion. The recommended relative humidity range is 30 - 60%.

Carbon monoxide levels should be 0-2 parts per million (ppm) above ambient, < 9 ppm average. Carbon Dioxide levels should remain < 850 ppm ("Industrial Hygienist's Guide to Indoor Air Quality Investigations" published by the American Industrial Hygiene Association, Technical Committee on Indoor Environmental Quality). ASHRAE 62-1999 recommends indoor carbon dioxide levels no greater than 700 ppm higher than outdoor levels (outdoor levels generally range from 300-500 ppm).

There are no “standards” for building microbial burden. Complaint areas are generally compared with non-complaint areas and outside air.

Results and Conclusions

Temperature, relative humidity, carbon dioxide, and carbon monoxide measurements by location are tabulated in Attachment A.

Microbial results are tabulated in Attachment B.

Temperatures throughout the building ranged from 66.9 – 76.4 ^{0}F. Indoor relative humidity ranged from 22.3 – 27.4%. Temperature was generally within acceptable range as recommended by ASHRAE, with 6 of 97 readings exceeding 75^{0}F. All indoor relative humidity measurements were below 30%. While this is below ASHRAE recommended range, it is not unusual during this season, in this location, in a facility that is not mechanically humidified.

Carbon dioxide measurements throughout the building ranged from 443-1031 ppm. Indoor measurements were found to be no greater than 700 ppm above outdoor measurements. 37 of 99 measurements on floors 2-11 had carbon dioxide readings exceeding 850 ppm which the "Industrial Hygienist's Guide to Indoor Air Quality Investigations" published by the American Industrial Hygiene Association, Technical Committee on Indoor Environmental Quality recommends as a point above which may require further evaluation.

Carbon dioxide levels as a function of time of day were graphed for the entire building to determine if levels increase over time (Attachment C). The graph shows no particular trend in CO2 levels with respect to time of day.

Carbon dioxide levels as a function of time were then graphed on a floor by floor basis. These graphs are located in Attachment D. Results show fluctuations throughout the period monitored.

Carbon monoxide levels throughout the facility ranged from 0-2 ppm, which is within recommended guidelines.

Recommendations

Based upon this limited scope investigation, DFOH recommends the HVAC system on should be checked to ensure all components are properly operating, and that fresh air is adequately distributed to the space;

visual inspection to detect any fungal proliferation in the areas where Aspergillus or Penicillium were found identified.

Attachment A

IAQ Measurements

Attachment B

Microbial Sample Results

Attachment C

CO2 vs. Time Graph

Attachment D

Floor by Floor

CO2 vs. Time Graphs

USPHS DFOH ENVIRONMENTAL MICROBIOLOGY LABORATORY

PHILADELPHIA, PA

LABORATORY REPORT #NOAA-01-IAQ-1R

Client agency: National Oceanic and Atmospheric Administration, Silver Spring, MD

POIS#/task #: D8H01CO31200 / 9903

Sampling dates: 2/21/01

Dates of inoculation: 2/21/01

General location: Silver Spring, MD

Specific location: SSMC-3

Sampling technique: Air (Andersen N-6 sampler) sampling

Medium used: Malt extract agar (MEA) and cellulose Czapek agar (CCA) for fungi

Samples submitted by: J. Sobelman

Date characterization completed: 3/5/01

Air samples on MEA and CCA plates

Sample ID	Sampling Location	Air Volume (L)	Fungi on MEA @ 25º C	*Stachybotrys chartarum**** on CCA @ 25º C
3-15-1	15th floor, room 15876	84.9	1. *Paecilomyces* (1*) CFU/m^3 = 12	Absent
3-15-2	15th floor, room 15603	84.9	No fungal growth CFU/m^3 < 12	Absent
3-15-3	15th floor, room 15639	84.9	No fungal growth CFU/m^3 < 12	Absent
3-15-4	15th floor, room 15736	84.9	1. *Penicillium* (1) CFU/m^3 = 12	Absent

3-14-1	14th floor, room 14806	84.9	No fungal growth CFU/m^3 < 12	Absent
3-14-2	14th floor, room 14703	84.9	No fungal growth CFU/m^3 < 12	**Absent**
3-14-3	14th floor, room 14619	84.9	No fungal growth CFU/m^3 < 12	Absent
3-14-4	14th floor, room 14659	84.9	1. Ascomycetes (1) CFU/m^3 = 12	Absent
3-13-1	13th floor, room 13825	84.9	No fungal growth CFU/m^3 < 12	Absent
3-13-2	13th floor, room 13729	84.9	No fungal growth CFU/m^3 < 12	Absent
3-13-3	13th floor, room 13602	84.9	1. *Paecilomyces* (1) CFU/m^3 = 12	Absent
3-13-4	13th floor, room 13661	84.9	1. *Aspergillus sp.* (1) CFU/m^3 = 12	Absent
3-12-1	12th floor, room 12837	84.9	No fungal growth CFU/m^3 < 12	Absent

Sample ID	**Sampling Location**	**Air Volume (L)**	**Fungi on MEA @ 25º C**	***Stachybotrys chartarum**** on CCA @ 25º C**
3-12-2	12th floor, room 12747 (across from 12737)	84.9	No fungal growth CFU/m^3 < 12	Absent
3-12-3	12th floor, room 12620	84.9	No fungal growth CFU/m^3 < 12	Absent
3-12-4	12th floor, room 12660	84.9	No fungal growth CFU/m^3 < 12	Absent
3-11-1	11th floor, corridor adjacent to 11722	84.9	1. *Cladosporium* (1) 2. *Scopulariopsis* (1) 3. Basidiomycetes (1) CFU/m^3 = 35	Absent
3-11-2	11th floor, room 11716	84.9	No fungal growth CFU/m^3 < 12	Absent
3-11-3	11th floor, room 11621	84.9	No fungal growth CFU/m^3 < 12	Absent

3-11-4	11th floor, lobby area adjacent to room 11651	84.9	1. *Penicillium* (1) CFU/m3 = 12	Absent
3-10-1	10th floor, hallway outside 10837	84.9	1. *Aspergillus niger*** (1) 2. *Paecilomyces* (1) 3. Basidiomycetes (1) CFU/m3 = 35	**Absent**
3-10-2	10th floor, corridor adjacent to room 10713	84.9	1. *Cladosporium* (1) 2. *Penicillium* (1) 3. Basidiomycetes (1) CFU/m3 = 35	Absent
3-10-3	10th floor, room 10603	84.9	**No fungal growth** CFU/m3 < 12	Absent
3-10-4	10th floor, room 10641	84.9	No fungal growth CFU/m3 < 12	Absent
3-9-1	9th floor, room 9823	84.9	No fungal growth CFU/m3 < 12	Absent
3-9-2	9th floor, room 9731	84.9	1. *Alternaria* (3) 2. *Cladosporium* (2) 3. Basidiomycetes (1) CFU/m3 = 71	Absent
3-9-3	9th floor, room 9755	84.9	No fungal growth CFU/m3 < 12	Absent
3-9-4	9th floor, room 9655	84.9	No fungal growth CFU/m3 < 12	Absent

Sample ID	**Sampling Location**	**Air Volume (L)**	**Fungi on MEA @ 25º C**	***Stachybotrys chartarum*** on CCA @ 25º C**
3-8-1	8th floor, corridor adjacent to room 8429	84.9	No fungal growth CFU/m3 < 12	Absent
3-8-2	8th floor, room 8360	84.9	No fungal growth CFU/m3 < 12	Absent
3-8-3	8th floor, room 8219, occupied	84.9	No fungal growth CFU/m3 < 12	Absent
3-8-4	8th floor, room 8112, occupied	84.9	1. *Paecilomyces* (1) CFU/m3 = 12	Absent

3-7-1	7th floor, room 7782	84.9	1. Basidiomycetes (1) CFU/m^3 = 12	Absent
3-7-2	7th floor, room 7748	84.9	No fungal growth CFU/m^3 < 12	Absent
3-7-3	7th floor, corridor by 7MEI	84.9	1. Basidiomycetes (1) CFU/m^3 = 12	Absent
3-7-4	7th floor, room 7661	84.9	No fungal growth CFU/m^3 < 12	Absent
3-6-1	6th floor, room 6817	84.9	1. Basidiomycetes (2) CFU/m^3 = 24	Absent
3-6-2	6th floor, room 6729	84.9	No fungal growth CFU/m^3 < 12	Absent
3-6-3	6th floor, room 6657	84.9	1. *Paecilomyces* (1) CFU/m^3 = 12	Absent
3-6-4	6th floor, hall near 6ME1	84.9	1. Ascomycetes (1) CFU/m^3 = 12	Absent
3-5-1	5th floor, no number, window cube behind room 5826	84.9	No fungal growth CFU/m^3 < 12	Absent
3-5-2	5th floor, room 5651	84.9	1. *Aureobasidium* (1) CFU/m^3 = 12	Absent
3-5-3	5th floor, hall near 5MEI	84.9	1. Basidiomycetes (1) CFU/m^3 = 12	Absent
3-5-4	5th floor, conference room 5836	84.9	No fungal growth CFU/m^3 < 12	Absent
3-4-1	4th floor, room 4846	84.9	No fungal growth CFU/m^3 < 12	Absent
3-4-2	4th floor, room 4746	84.9	No fungal growth CFU/m^3 < 12	Absent
3-4-3	4th floor, room 4648	84.9	1. *Aureobasidium* (1) CFU/m^3 = 12	Absent

Sample ID	**Sampling Location**	**Air Volume (L)**	**Fungi on MEA @ 25º C**	***Stachybotrys chartarum**** on CCA @ 25º C**
3-4-4	4th floor, hall by 4ME1	84.9	No fungal growth CFU/m^3 < 12	Absent

3-3-1	3rd floor, room 3833/3834	84.9	1. Basidiomycetes (1) CFU/m^3 = 12		Absent
3-3-2	3rd floor, room 3712	84.9	1. Basidiomycetes (1) CFU/m^3 = 12		Absent
3-3-3	3rd floor, room 3646	84.9	No fungal growth CFU/m^3 < 12		Absent
3-3-4	3rd floor, hall outside 3ME1	84.9	No fungal growth CFU/m^3 < 12		Absent
3-2-1	2nd floor, "Weather Data"	84.9	1. Basidiomycetes (1) CFU/m^3 = 12		Absent
3-2-2	2nd floor stacks-journals Chesapeake	84.9	No fungal growth CFU/m^3 < 12		Absent
3-2-3	2nd floor stacks 526.9-528.1	84.9	No fungal growth CFU/m^3 < 12		Absent
3-2-4	2nd floor, hall near 2ME1	84.9	1. *Cladosporium* (4) 2. Basidiomycetes (2) CFU/m^3 = 71	**Absent**	
3-2-5	2nd floor, near window opposite stack	84.9	1. Basidiomycetes (3) CFU/m^3 = 35		Absent
3-2-6	2nd floor, stacks LC classified range #31	84.9	1. *Aureobasidium* (1) 2. *Penicillium* (1) 3. Ascomycetes (1) CFU/m^3 = 35		Absent
3-2-7	2nd floor, near window @ oversize M82.3/26-M94	84.9	1. *Cladosporium* (1) 2. Ascomycetes (1) CFU/m^3 = 24		Absent
3-2-8	2nd floor, Hall near 2ME2	84.9	1. *Aureobasidium* (1) CFU/m^3 = 12		Absent
3-OA-3	Outside building (3 minutes)	84.9	1. *Cladosporium* (6) 2. *Alternaria* (2) 3. *Aspergillus fumigatus*** (1) 4. Basidiomycetes (4) CFU/m^3 = 153		Absent
3-OA-1	Outside building (1 minute)	84.9	1. *Cladosporium* (4) 2. *Aureobasidium* (3) 3. Basidiomycetes (2) CFU/m^3 = 106	**Absent**	

Sample ID	Sampling Location	Air Volume (L)	Fungi on MEA @ 25º C	*Stachybotrys chartarum**** on CCA @ 25º C
FC1	M2 floor, aerobic room	84.9	1. *Nigrospora* (1) 2. Basidiomycetes (2) CFU/m^3 = 35	Absent
FC2	M2 floor, weight room mirror side	84.9	1. *Paecilomyces* (1) CFU/m^3 = 12	Absent
FC3	M2 floor, weight room window side	84.9	1. *Nigrospora* (1) 2. Basidiomycetes (1) CFU/m^3 = 24	Absent
FC4	M2floor, M2656 aerobic room	84.9	No fungal growth CFU/m^3 < 12	Absent
3-1-1	1st floor, entrance to cafeteria	84.9	*1.* *Cladosporium* (1) 2. *Penicillium* (1) 3. Basidiomycetes (3) CFU/m^3 = 59	Absent
3-1-2	1st floor, cafeteria seating area, E side	84.9	1. Basidiomycetes (2) CFU/m^3 = 24	Absent
3-1-3	1st floor, cafeteria seating area	84.9	1. *Paecilomyces* (2) 2. *Aspergillus sp.* (1) 3. *Penicillium* (1) 4. Ascomycetes (1) CFU/m^3 = 59	Absent
3-1-4	1st floor, lobby security	84.9	1. *Cladosporium* (2) 2. *Nigrospora* (1) 3. Basidiomycetes (2) CFU/m^3 = 59	**Absent**
3-3-5	3rd floor, mail room near window	84.9	1. *Cladosporium* (1) 2. Basidiomycetes (2) CFU/m^3 = 35	Absent
3-3-6	3rd floor, corridor adjacent to room 3331	84.9	1. Basidiomycetes (1) CFU/m^3 = 12	Absent

3-3-7	3rd floor, room 3461	84.9	1. *Cladosporium* (1) CFU/m3 = 12	Absent
3-3-8	3rd floor, hall adjacent to 3ME2	84.9	1. *Cladosporium* (1) CFU/m3 = 12	Absent
3-4-5	4th floor, room 4102	84.9	No fungal growth CFU/m3 < 12	Absent
3-4-6	4th floor, room 4226	84.9	No fungal growth CFU/m3 < 12	Absent

Sample ID	Sampling Location	Air Volume (L)	Fungi on MEA @ 25º C	*Stachybotrys chartarum**** on CCA @ 25º C
3-4-7	4th floor, room 4342	84.9	No fungal growth CFU/m3 < 12	Absent
3-4-8	4th floor, hall near 4ME2	84.9	1. *Aspergillus fumigatus*** (1) CFU/m3 = 12	Absent
3-5-5	5th floor, room 5101	84.9	1. *Aspergillus sp.* (1) 2. *Aureobasidium* (1) CFU/m3 = 24	Absent
3-5-6	5th floor, project file room 5200	84.9	No fungal growth CFU/m3 < 12	Absent
3-5-7	5th floor, room 5362	84.9	1. *Aspergillus sp.* (1) CFU/m3 = 12	Absent
3-5-8	5th floor, hall near 5ME2	84.9	1. Basidiomycetes (1) CFU/m3 = 12	Absent
3-6-5	6th floor, room 6128	84.9	No fungal growth CFU/m3 < 12	Absent
3-6-6	6th floor, room 6226	84.9	1. *Paecilomyces* (1) 2. *Penicillium* (1) 3. Basidiomycetes (1) CFU/m3 = 35	Absent
3-6-7	6th floor, room 6357	84.9	1. Basidiomycetes (1) CFU/m3 = 12	Absent
3-6-8	6th floor, hall near 6ME2	84.9	1. Basidiomycetes (2) CFU/m3 = 24	Absent
3-7-5	7th floor, room 7141	84.9	No fungal growth CFU/m3 < 12	Absent

3-7-6	7th floor, corridor adjacent to room 7307 between files	84.9	No fungal growth CFU/m^3 < 12	Absent
3-7-7	7th floor, room 7357	84.9	No fungal growth CFU/m^3 < 12	Absent
3-7-8	7th floor, hall near 7ME2	84.9	1. *Aureobasidium* (1) 2. *Cladosporium* (1) CFU/m^3 = 24	Absent
3-8-5	8th floor, conference room 8817	84.9	1. Basidiomycetes (3) CFU/m^3 = 35	Absent
3-8-6	8th floor, room 8718	84.9	1. *Paecilomyces* (1) CFU/m^3 = 12	Absent
3-8-7	8th floor, room 8657	84.9	No fungal growth CFU/m^3 < 12	Absent

Sample ID	**Sampling Location**	**Air Volume (L)**	**Fungi on MEA @ 25º C**	***Stachybotrys chartarum**** on CCA @ 25º C**
3-8-8	8th floor, hall near 8ME1	84.9	1. *Aureobasidium* (1) 2. *Paecilomyces* (1) CFU/m^3 = 24	Absent
3-9-5	9th floor, outside room 9127	84.9	No fungal growth CFU/m^3 < 12	Absent
3-9-6	9th floor, room 9245	84.9	No fungal growth CFU/m^3 < 12	Absent
3-9-7	9th floor, room 9356	84.9	No fungal growth CFU/m^3 < 12	Absent
3-9-8	9th floor, corridor by 9ME2	84.9	1. Basidiomycetes (2) CFU/m^3 = 24	Absent
3-10-5	10th floor, room 10142	84.9	No fungal growth CFU/m^3 < 12	Absent
3-10-6	10th floor, room 10338	84.9	1. *Paecilomyces* (1) CFU/m^3 = 12	Absent
3-10-7	10th floor, room 10556	84.9	1. *Paecilomyces* (1) CFU/m^3 = 12	Absent
3-10-8	10th floor, hall near 10ME2	84.9	No fungal growth CFU/m^3 < 12	Absent

3-11-5	11th floor, outside room 11129	84.9	1. *Aspergillus fumigatus*** (1) 2. *Epicoccum* (1) CFU/m^3 = 24	Absent
3-11-6	11th floor, room 11217	84.9	1. *Stachybotrys chartarum**** (1) 2. Basidiomycetes (1) CFU/m^3 = 24	Absent
3-11-7	11th floor, room 11464	84.9	**No fungal growth** CFU/m^3 < 12	Absent
3-11-8	11th floor, hall outside 11ME2	84.9	**No fungal growth** CFU/m^3 < 12	Absent
3-12-5	12th floor, room 12112	84.9	1. *Cladosporium* (1) CFU/m^3 = 12	Absent
3-12-6	12th floor, room 12338	84.9	**No fungal growth** CFU/m^3 < 12	Absent
3-12-7	12th floor, room 12358	84.9	1. *Penicillium* (1) CFU/m^3 = 12	Absent
3-12-8	12th floor, hall outside 12ME2	84.9	**No fungal growth** CFU/m^3 < 12	Absent
3-13-5	13th floor, room 13117	84.9	1. *Acremonium* (1) CFU/m^3 = 12	Absent

Sample ID	**Sampling Location**	**Air Volume (L)**	**Fungi on MEA @ 25º C**	***Stachybotrys chartarum**** **on CCA @ 25º C**
3-13-6	13th floor, room 13219	84.9	**No fungal growth** CFU/m^3 < 12	Absent
3-13-7	13th floor, near windows adjacent to room 13341	84.9	**No fungal growth** CFU/m^3 < 12	Absent
3-13-8	13th floor, hall near 13ME2	84.9	**No fungal growth** CFU/m^3 < 12	Absent
3-14-7	14th floor, window opposite room 14453	84.9	**No fungal growth** CFU/m^3 < 12	Absent
3-14-8	14th floor, hall near 14ME2	84.9	**No fungal growth** CFU/m^3 < 12	Absent

3-15-5	15th floor, room 15205	84.9	1. *Aureobasidium* (9) CFU/m^3 = 106	Absent
3-15-6	15th floor, room 15306	84.9	1. Basidiomycetes (1) CFU/m^3 = 12	Absent
3-15-7	15th floor, room 15448	84.9	1. *Paecilomyces* (1) CFU/m^3 = 12	Absent
3-15-8	15th floor, hall near I5ME2	84.9	1. Basidiomycetes (2) CFU/m^3 = 24	Absent
SB	Shipping blank	NA#	**No fungal growth**	Absent

* Colony counts.

** Opportunistic fungi.

*** Toxigenic fungi.

Not applicable.